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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,402	04/06/2005	Elena Lialiamou	042933/373916	4428

10949   7590   02/02/2011
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ART UNIT	PAPER NUMBER
2473	

MAIL DATE	DELIVERY MODE
02/02/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 January 2011</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21 and 25-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21 and 25-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or

described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negatived

by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
   or nonobviousness.

1.   Claims 1, 11, 21, 23, 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Roberts (US 2003/0152039) in view of Ise et al. (US 6,336,129)

For claim 1 and similarly claim 23, Roberts discloses A method, comprising:

enforcing a charging policy (see section 0012-14 "determining said rules and each packet

address, a respective billing tariff and account for that packet" and section 0020-0021) at

a network element (see section 0020-21 "charging information is achieved via the

analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished and section 0028, 0058

"charging is related to content or application, rules within the GGSN will be

triggered...charging rates being applied.." and section 0062-68 "GGSN filter...and is at

a MusicSite rate" and section 0095, section 0101 "GGSN matches site IP address/URL

etc and places costs in the relevant traffic CDS"; section 0104) to be applied to a data

flow reaching the network element (see section 014 "packet analyzer for determining

from said rules and each packet address, a respective billing tariff" and section 0021

"analysis of packet, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished; section 0024, and section

0028, section 0036; there are multiple possible flows for providing different services /

content i.e. see figure 1, different content / application servers) during a packet data

protocol context (see section 0004 "billing system to differentiate between different

services on the same PDP context"; sections 0062-79 "PDP context"; section 0087

"context is set-up"; during a PDP context user can have multiple flow from / to different

content / applications), the packet data protocol context (see section 0004 "billing system

to differentiate between different services on the same PDP context"; sections 0062-79

"PDP context"; section 0087 "context is set-up") comprising a plurality of data flows (see

section 0004 "billing system to differentiate between different services on the same PDP

context"; sections 0062-79 "PDP context") including the data flow (see section 0004

"billing system to differentiate between different services on the same PDP context";

sections 0062-79 "PDP context"; section 0087 "context is set-up"; during a PDP context

user can have multiple flow from / to different content / applications), with each data

flow of the plurality of data flows being distinguishable by a set of flow parameters (see

section 0012-014 "each packet having an address…determining from….each packet

address…packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application is distinguished by URL / IP and port number; and section 0027-28, section

0036 "IP address or URL…provisioning the relevant URLs as required…"; sections

0062-0079 "URL…PDP context…IP address…charging ID…"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced reate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"), wherein said charging policy defines charging rules for the

data flow (see section 0012-14 "determining said rules and each packet address, a

respective billing tariff and account for that packet" section 0020-21 "charging

information is achieved via the analysis of packets, preferably at the GGSN...URL or IP

address and port number of the server...protocol"; flow of a server / application

distinguished; see section 0024; different application / servers and therefore the data flow

(s) will attract different billing rates; and section 0028, 0058 "charging is related to

content or application, rules within the GGSN will be triggered…charging rates being

applied.." and section 0062-68 "GGSN filter…and is at a MusicSite rate" and section

0095, section 0101 "GGSN matches site IP address/URL etc and places costs in the

relevant traffic CDS"; section 0104):

observing the data packets reaching said network element (see section 0012-014 "each

packet having an address…determining from….each packet address...packet analyzer for

determining from said rules and each packet address, a respective billing tariff" and

section 0021 "analysis of packets, preferably at the GGSN...URL or IP address and port

number of the server...protocol"; flow of a server / application distinguished and section

0027-28, section 0036 "IP address or URL…provisioning the relevant URLs as

required…"; sections 0062-0079 "URL…PDP context…IP address…charging ID…";

section 0093-96 "initiates the FTP…free access URL…track is downloaded…reduced

rate…IP multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP

session…the GGSN matches site IP address/ URL etc and places cost in the relevant

tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge

based on storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"),

and detecting the data flow from flow parameters included in the data packets (see

section 0012-014 "each packet having an address…determining from….each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; packets matched to

a flow of a server / application distinguished via URL, IP and port and section 0027-28,

section 0036 "IP address or URL...provisioning the relevant URLs as required..."';

sections 0062-0079 "URL...PDP context...IP address...charging ID..."; section 0093-96

"initiates the FTP...free access URL...track is downloaded...reduced reate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming..."), wherein the

flow parameters indicate the charging policy to be enforced on the data flow (see section

0012-014 "each packet having an address...determining from....each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and section 0027-28, section 0036 "IP

address or URL...provisioning the relevant URLs as required..."; sections 0062-0079

"URL...PDP context...IP address...charging ID..."; section 0093-96 "initiates the

FTP...free access URL...track is downloaded...reduced reate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming...")

;

mapping the data packets to the data flow in accordance with the at least one flow

parameter included in a respective data packet (see section 0012-014 "each packet having

an address...determining from....each packet address...packet analyzer for determining

from said rules and each packet address, a respective billing tariff" and section 0021

"analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; section 0021 "analysis of packets, preferably at the GGSN...URL or IP

address and port number of the server...protocol"; packets matched to a flow of a server /

application distinguished via URL, IP and port and section 0027-28, section 0036 "IP

address or URL...provisioning the relevant URLs as required..."; sections 0062-0079

"URL...PDP context...IP address...charging ID..."; section 0093-96 "initiates the

FTP...free access URL...track is downloaded...reduced reate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 "VoIP/Video Streaming...");

matching the data flow to the charging policy (see section 0012-014 "each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished; see section 0024; different application / servers and therefore the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 "IP address or URL...provisioning the relevant URLs as required..."; 0058 "charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.."; sections 0062-0079 "URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate"; section 0093-96 "initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"); and

applying said charging policy to said data flows to generate charging information (see

section 0012-014 "each packet having an address…determining from….each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0020-21 "charging information is achieved via the

analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished; see section 0024; different

application / servers and therefore the data flow (s) will attract different billing rates; and

sections 0026-28, section 0036 "IP address or URL…provisioning the relevant URLs as

required…"; 0058 "charging is related to content or application, rules within the GGSN

will be triggered…charging rates being applied.."; sections 0062-0079 "URL…PDP

context…IP address…charging ID… GGSN filter…and is at a MusicSite rate"; section

0093-96 "initiates the FTP…free access URL…track is downloaded…reduced rate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"; section 0015" purchased goods or services are debited to a

customer pre-paid or postpaid account….credit applied to an account held by the provider

of those goods or services", section 0017 "credit transfer", section 0021, 0024, 0026

"account..accounting system", section 0030, 0060

"transaction…account..bill…accounting….records..").

For claim 23, Roberts discloses a computer program embodied on a computer-readable medium, the computer program (see section 0019 "methos may be performed…control of software in machine readable form on a storage medium") configured to control a processor (see figure) to perform operations (see section 0019 "methos may be performed…control of software in machine readable form on a storage medium")

For claim 11, Roberts discloses enforce a charging policy at a network element (see section 014 "packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packet, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished; section 0024, and section 0028, section 0036; there are multiple possible flows for providing different services / content i.e. see figure 1, different content / application servers) to be applied to a data flow reaching the network element (see section 0012-014 "each packet having an address…determining from….each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished; see

section 0024; different application / servers and therefore the data flow (s) will attract

different billing rates; and sections 0026-28, section 0036 "IP address or

URL…provisioning the relevant URLs as required…"; 0058 "charging is related to

content or application, rules within the GGSN will be triggered…charging rates being

applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID… GGSN

filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free access

URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction…account..bill…accounting….records..") during a packet

data protocol context (see section 0004 "billing system to differentiate between different

services on the same PDP context"; sections 0062-79 "PDP context"; section 0087

"context is set-up"), the packet data protocol context comprising a plurality of data flows

(see section 0004 "billing system to differentiate between different services on the same

PDP context"; sections 0062-79 "PDP context") including the data flow (see section

0004 "billing system to differentiate between different services on the same PDP

context"; sections 0062-79 "PDP context"; section 0087 "context is set-up"; during a

PDP context user can have multiple flow from / to different content / applications), data

flows of the plurality of data flows being distinguishable by a set of flow parameters (see

section 0012-014 "each packet having an address…determining from….each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0027-28, section 0036 "IP address or

URL…provisioning the relevant URLs as required…"; sections 0062-0079 "URL…PDP

context…IP address…charging ID…"; section 0093-96 "initiates the FTP…free access

URL…track is downloaded…reduced reate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"),

 wherein said charging policy defines charging rules per data flow of the plurality of data

flows (see section 0012-014 "each packet having an address…determining from….each

packet address...packet analyzer for determining from said rules and each packet address,

a respective billing tariff" and section 0020-21 "charging information is achieved via the

analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished; see section 0024; different

application / servers and therefore the data flow (s) will attract different billing rates; and

sections 0026-28, section 0036 "IP address or URL...provisioning the relevant URLs as

required..."; 0058 "charging is related to content or application, rules within the GGSN

will be triggered...charging rates being applied.."; sections 0062-0079 "URL...PDP

context...IP address...charging ID... GGSN filter...and is at a MusicSite rate"; section

0093-96 "initiates the FTP...free access URL...track is downloaded...reduced rate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming...";);

observe said data packets reaching said network element (see section 0012-014 "each

packet having an address...determining from....each packet address...packet analyzer for

determining from said rules and each packet address, a respective billing tariff" and

section 0021 "analysis of packets, preferably at the GGSN...URL or IP address and port

number of the server...protocol"; flow of a server / application distinguished and section

0027-28, section 0036 "IP address or URL...provisioning the relevant URLs as

required..."; sections 0062-0079 "URL...PDP context...IP address...charging ID...";

section 0093-96 "initiates the FTP...free access URL...track is downloaded...reduced

reate...IP multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP

session...the GGSN matches site IP address/ URL etc and places cost in the relevant

tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge

based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming..."),

detect the data flow from flow parameters included in the observed data packets (see

section 0012-014 "each packet having an address...determining from....each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0027-28, section 0036 "IP address or

URL...provisioning the relevant URLs as required..."; sections 0062-0079 "URL...PDP

context...IP address...charging ID..."; section 0093-96 "initiates the FTP...free access

URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets";

section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP

address is part of GGSN zero-rate filter...downloaded packets...after one-time URL

allocated...charging...; section 0114 "VoIP/Video Streaming..."), wherein the

flow parameters indicate the charging policy to be enforced on the data flow (see section

0012-014 "each packet having an address…determining from….each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and section 0027-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; sections 0062-0079

"URL…PDP context…IP address…charging ID…"; section 0093-96 "initiates the

FTP…free access URL…track is downloaded…reduced reate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…")

;

map the data packets to the data flow in accordance with the at least one flow parameter

included in a respective data packet (see section 0012-014 "each packet having an

address…determining from….each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0021 "analysis

of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished and section 0027-28,

section 0036 "IP address or URL...provisioning the relevant URLs as required...";

sections 0062-0079 "URL...PDP context...IP address...charging ID..."; section 0093-96

"initiates the FTP...free access URL...track is downloaded...reduced rate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming...");

match the data flow to the charging policy (see section 0012-014 "each packet having an

address...determining from....each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates and sections 0026-28, section 0036 "IP

address or URL...provisioning the relevant URLs as required..."; 0058 "charging is

related to content or application, rules within the GGSN will be triggered...charging rates

being applied.."; sections 0062-0079 "URL...PDP context...IP address...charging ID...

GGSN filter...and is at a MusicSite rate"; section 0093-96 "initiates the FTP...free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges…"; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…");

apply said charging policy to said data flows (see section 0012-014 "each packet having

an address…determining from….each packet address...packet analyzer for determining

from said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates and sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges…"; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction…account..bill…accounting….records..");

generate charging information (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application distinguished and sections 0026-28, section 0036 "IP address or

URL…provisioning the relevant URLs as required…"; 0058 "charging is related to

content or application, rules within the GGSN will be triggered…charging rates being

applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID… GGSN

filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free access

URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction…account..bill…accounting….records..."), in response to

applying said charging policy (see section 0012-014 "each packet having an

address…determining from….each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates ; sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account....credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction...account..bill...accounting....records..").

For claim 21, Roberts discloses enforcing means (see figure; reference char 1-5,10, 13)

configured to enforce a charging policy at a network element to be applied to data

packets reaching the network element (see section 0012-014 "each packet having an

address...determining from....each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and sections 0026-28, section 0036 "IP address or

URL...provisioning the relevant URLs as required..."; 0058 "charging is related to

content or application, rules within the GGSN will be triggered...charging rates being

applied.."; sections 0062-0079 "URL...PDP context...IP address...charging ID... GGSN

filter...and is at a MusicSite rate"; section 0093-96 "initiates the FTP...free access

URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets";

section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP

address is part of GGSN zero-rate filter...downloaded packets...after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction…account..bill…accounting….records..") during a packet

data protocol context (see section 0004 "billing system to differentiate between different

services on the same PDP context"; sections 0062-79 "PDP context"; section 0087

"context is set-up"), the packet data protocol context comprising a plurality of data flows

(see section 0004 "billing system to differentiate between different services on the same

PDP context"; sections 0062-79 "PDP context"; section 0087 "context is set-up")

including the data flow (see section 0004 "billing system to differentiate between

different services on the same PDP context"; sections 0062-79 "PDP context"; section

0087 "context is set-up"; during a PDP context user can have multiple flow from / to

different content / applications), with each data flow of the plurality of data flows being

distinguishable by a set of flow parameters (see section 0012-014 "each packet having an

address…determining from….each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0021 "analysis

of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished and section 0027-28,

section 0036 "IP address or URL…provisioning the relevant URLs as required…";

sections 0062-0079 "URL…PDP context…IP address…charging ID…"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced reate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"),

wherein said charging policy defines charging rules for the data flow (see section 0012-

014 "each packet having an address…determining from….each packet address...packet

analyzer for determining from said rules and each packet address, a respective billing

tariff" and section 0020-21 "charging information is achieved via the analysis of packets,

preferably at the GGSN...URL or IP address and port number of the server...protocol";

flow of a server / application distinguished and see section 0024; different application /

servers and therefore the data flow (s) will attract different billing rates; and sections

0026-28, section 0036 "IP address or URL…provisioning the relevant URLs as

required…"; 0058 "charging is related to content or application, rules within the GGSN

will be triggered…charging rates being applied.."; sections 0062-0079 "URL…PDP

context…IP address…charging ID… GGSN filter…and is at a MusicSite rate"; section

0093-96 "initiates the FTP…free access URL…track is downloaded…reduced rate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…";);

observation means (see figure; reference char 1-5,10, 13) configured to observe a data

flow reaching said network element (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0021 "analysis

of packets, preferably at the GGSN…URL or IP address and port number of the

server…protocol"; flow of a server / application distinguished and section 0027-28,

section 0036 "IP address or URL…provisioning the relevant URLs as required…";

sections 0062-0079 "URL…PDP context…IP address…charging ID…"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced reate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"),

the observation means (see figure; reference char 1-5,10, 13) being further configured to detect the data flow from flow parameters included in the data packets (see section 0012-014 "each packet having an address…determining from….each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished and section 0027-28, section 0036 "IP address or URL…provisioning the relevant URLs as required…"; sections 0062-0079 "URL…PDP context…IP address…charging ID…"; section 0093-96 "initiates the FTP…free access URL…track is downloaded…reduced reate…IP multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate filter…downloaded packets…after one-time URL allocated…charging…; section 0114 "VoIP/Video Streaming…");

detecting means (see figure; reference char 1-5,10, 13) configured to detect the data flow from flow parameters included in the data packets (see section 0012-014 "each packet having an address…determining from….each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished and section

0027-28, section 0036 "IP address or URL…provisioning the relevant URLs as

required…"; sections 0062-0079 "URL…PDP context…IP address…charging ID…";

section 0093-96 "initiates the FTP…free access URL…track is downloaded…reduced

reate…IP multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP

session…the GGSN matches site IP address/ URL etc and places cost in the relevant

tariff CDR..real-time usage based charges…"; section 0104-109 "packets being charge

based on storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"), wherein the

flow parameters indicate the charging policy to be enforced on the data flow (see section

0012-014 "each packet having an address…determining from….each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and section 0027-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; sections 0062-0079

"URL…PDP context…IP address…charging ID…"; section 0093-96 "initiates the

FTP…free access URL…track is downloaded…reduced reate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…")

mapping means (see figure; reference char 1-5,10, 13) configured to map each of the

data packets to the data flows in accordance with the at least one flow parameter included

in a respective data packet (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0021 "analysis

of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished and section 0027-28,

section 0036 "IP address or URL…provisioning the relevant URLs as required…";

sections 0062-0079 "URL…PDP context…IP address…charging ID…"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced rate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…");

matching means (see figure; reference char 1-5,10, 13) configured to match said data

flows of data to the charging policy (see section 0012-014 "each packet having an

address...determining from....each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and see section 0024; different application / servers and

therefore the data flow (s) will attract different billing rates; and sections 0026-28,

section 0036 "IP address or URL...provisioning the relevant URLs as required..."; 0058

"charging is related to content or application, rules within the GGSN will be

triggered...charging rates being applied.."; sections 0062-0079 "URL...PDP context...IP

address...charging ID... GGSN filter...and is at a MusicSite rate"; section 0093-96

"initiates the FTP...free access URL...track is downloaded...reduced rate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming...");

application means (see figure; reference char 1-5,10, 13) configured to apply said

charging policy to said data flows (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application distinguished and see section 0024; different application / servers and

therefore the data flow (s) will attract different billing rates; and sections 0026-28,

section 0036 "IP address or URL…provisioning the relevant URLs as required…"; 0058

"charging is related to content or application, rules within the GGSN will be

triggered…charging rates being applied.."; sections 0062-0079 "URL…PDP context…IP

address…charging ID… GGSN filter…and is at a MusicSite rate"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced rate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"; section 0015" purchased goods or services are debited to a

customer pre-paid or postpaid account….credit applied to an account held by the provider

of those goods or services", section 0017 "credit transfer", section 0021, 0024, 0026

"account..accounting system", section 0030, 0060

"transaction…account..bill…accounting….records..");

and generation means (see figure; reference char 1-5,10, 13), responsive to said

application means (see figure; reference char 1-5,10, 13), configured to generate

charging information (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application distinguished and sections 0026-28, section 0036 "IP address or

URL…provisioning the relevant URLs as required…"; 0058 "charging is related to

content or application, rules within the GGSN will be triggered…charging rates being

applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID… GGSN

filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free access

URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges…"; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0026 "account..accounting system",

section 0030, 0060 "transaction…account..bill…accounting….records..").

For claim 25 and similarly 26-27, Roberts discloses herein observing the data packets

includes observing the data packets reaching said network element (see section 0012-014

"each packet having an address…determining from….each packet address…packet

analyzer for determining from said rules and each packet address, a respective billing

tariff" and section 0021 "analysis of packets, preferably at the GGSN…URL or IP address

and port number of the server…protocol"; flow of a server / application distinguished and

section 0027-28, section 0036 "IP address or URL…provisioning the relevant URLs as

required…"; sections 0062-0079 "URL…PDP context…IP address…charging ID…";

section 0093-96 "initiates the FTP…free access URL…track is downloaded…reduced

reate…IP multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP

session…the GGSN matches site IP address/ URL etc and places cost in the relevant

tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge

based on storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"), the data packets including

the at least one flow parameter, the at least one flow parameter including a flow identifier

and a destination address (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0021 "analysis

of packets, preferably at the GGSN…URL or IP address and port number of the

server…protocol"; flow of a server / application distinguished and section 0027-28,

section 0036 "IP address or URL...provisioning the relevant URLs as required...";

sections 0062-0079 "URL...PDP context...IP address...charging ID..."; section 0093-96

"initiates the FTP...free access URL...track is downloaded...reduced reate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter...downloaded packets...after one-time URL allocated...charging...; section 0114

"VoIP/Video Streaming..."; parameters such as IP addresses, URL are present and can

be used when enforcing charging), wherein the flow identifier does not include the

destination address (see section 0012-014 "each packet having an address...determining

from....each packet address...packet analyzer for determining from said rules and each

packet address, a respective billing tariff" and section 0021 "analysis of packets,

preferably at the GGSN...URL or IP address and port number of the server...protocol";

flow of a server / application distinguished and section 0027-28, section 0036 "IP address

or URL...provisioning the relevant URLs as required..."; sections 0062-0079

"URL...PDP context...IP address...charging ID..."; section 0093-96 "initiates the

FTP...free access URL...track is downloaded...reduced reate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"; parameters such as IP addresses, URL are present and can

be used when enforcing charging).

For claim 28 and similarly 30 ,Roberts discloses selecting the charging policy based on

the at least one flow parameter, including the flow

identifier, of the data packets (see section 0012-014 "each packet having an

address…determining from….each packet address...packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished; see section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"); and

metering of the data packets of the data flow to generate a flow record comprising

information about the data flow (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application distinguished; see section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges…"; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account….credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0037, 0026 "account..accounting

system", section 0030, 0060 "transaction…account..bill…accounting….records..").

;

wherein applying said charging policy includes applying said charging policy to the flow

record to generate the charging information for the data flow (see section 0012-014 "each

packet having an address…determining from….each packet address…packet analyzer for

determining from said rules and each packet address, a respective billing tariff" and

section 0020-21 "charging information is achieved via the analysis of packets, preferably

at the GGSN…URL or IP address and port number of the server…protocol"; flow of a

server / application distinguished; see section 0024; different application / servers and

therefore the data flow (s) will attract different billing rates; and sections 0026-28, section

0036 "IP address or URL…provisioning the relevant URLs as required…"; 0058

"charging is related to content or application, rules within the GGSN will be

triggered…charging rates being applied.."; sections 0062-0079 "URL…PDP context…IP

address…charging ID… GGSN filter…and is at a MusicSite rate"; section 0093-96

"initiates the FTP…free access URL…track is downloaded…reduced rate…IP

multiplexes…chargeable packets"; section 0099-101 "IP sniffing…HTTP session…the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"; section 0015" purchased goods or services are debited to a

customer pre-paid or postpaid account….credit applied to an account held by the provider

of those goods or services", section 0017 "credit transfer", section 0021, 0024, 0037,

0026 "account..accounting system", section 0030, 0060

"transaction…account..bill…accounting….records..").

.

For claim 29 ,Roberts discloses select the charging policy based on the at least one flow

parameter, including the flow

identifier, of the data packets (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished; see section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"); and

meter of the data packets of the data flow to generate a flow record comprising

information about the data flow (see section 0012-014 "each packet having an

address…determining from….each packet address…packet analyzer for determining from

said rules and each packet address, a respective billing tariff" and section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN…URL or IP address and port number of the server…protocol"; flow of a server /

application distinguished; see section 0024; different application / servers and therefore

the data flow (s) will attract different billing rates; and sections 0026-28, section 0036 "IP

address or URL…provisioning the relevant URLs as required…"; 0058 "charging is

related to content or application, rules within the GGSN will be triggered…charging rates

being applied.."; sections 0062-0079 "URL…PDP context…IP address…charging ID…

GGSN filter…and is at a MusicSite rate"; section 0093-96 "initiates the FTP…free

access URL…track is downloaded…reduced rate…IP multiplexes…chargeable packets";

section 0099-101 "IP sniffing…HTTP session…the GGSN matches site IP address/ URL

etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section

0104-109 "packets being charge based on storefront…URL…server virtual domain/ IP

address is part of GGSN zero-rate filter…downloaded packets…after one-time URL

allocated…charging…; section 0114 "VoIP/Video Streaming…"; section 0015"

purchased goods or services are debited to a customer pre-paid or postpaid

account....credit applied to an account held by the provider of those goods or services",

section 0017 "credit transfer", section 0021, 0024, 0037, 0026 "account..accounting

system", section 0030, 0060 "transaction...account..bill...accounting....records..").

;

wherein the processor configured to cause the apparatus to apply said charging policy

includes being configured to cause the apparatus to apply said charging policy to the flow

record

to generate the charging information for the data flow.

 (see section 0012-014 "each packet having an address...determining from....each packet

address...packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0020-21 "charging information is achieved via the

analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished; see section 0024; different

application / servers and therefore the data flow (s) will attract different billing rates; and

sections 0026-28, section 0036 "IP address or URL...provisioning the relevant URLs as

required..."; 0058 "charging is related to content or application, rules within the GGSN

will be triggered...charging rates being applied.."; sections 0062-0079 "URL...PDP

context...IP address...charging ID... GGSN filter...and is at a MusicSite rate"; section

0093-96 "initiates the FTP...free access URL...track is downloaded...reduced rate...IP

multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-

time usage based charges..."; section 0104-109 "packets being charge based on

storefront…URL…server virtual domain/ IP address is part of GGSN zero-rate

filter…downloaded packets…after one-time URL allocated…charging…; section 0114

"VoIP/Video Streaming…"; section 0015" purchased goods or services are debited to a

customer pre-paid or postpaid account….credit applied to an account held by the provider

of those goods or services", section 0017 "credit transfer", section 0021, 0024, 0037,

0026 "account..accounting system", section 0030, 0060

"transaction…account..bill…accounting….records..").

For claim 30, Roberts discloses the means for selecting (see figure; reference char 1-

5,10, 13), means for metering (see figure; reference char 1-5,10, 13), application means

(see figure; reference char 1-5,10, 13).

Roberts does not explicitly discuss the following:

For claim 1 and similarly 11, 21, wherein the set of flow parameters includes a flow

identifier that distinguishes flows

having a common destination address.

Ise from the same or similar field of endeavor discloses the following features:

For claim 1 and similarly 11, 21, Ise discloses wherein the set of flow parameters

includes a flow identifier that distinguishes flows having a common destination address

(see col 2 lines 33-39 ; flows to same destination are differentiated by the port / protocol

used)

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify / combine the features of Roberts by using the above recited features,

as taught by Ise, in order to provide an improved billing arrangement

and method for a communications network, where specific flows that are associated with

specific services / goods / providers etc, are charged based on the policy associated with

such a flow (see Roberts sections 0008-13). It would have been obvious to a person of

ordinary skill in the art the at the time of the invention to use or implement differentiation

/ identification of flows using port / protocol information that have the same destination

(Ise) and implement such teaching to the flow differentiation / identification as taught by

Roberts. Therefore, the teaching of differentiating different flows even though they have

the same destination (eg. different multicast streams in Ise) was known in the prior art at

the time of the invention and it would have been obvious to a person of ordinary skill in

the art to implement such teaching to the similar teaching of identifying / differentiating

flows in Roberts which also utilizes ports and protocol information (see Roberts

paragraph 21). Therefore one is able to provide a specific charging policy based on the

services / goods / providers associated with that specific flow (Roberts paragraph 0021)

even if that flow has a same destination address as a different one (see Ise). As discussed

in Roberts paragraph 0021, use of port and protocol information is taught to identify

flows and their charging policy, therefore the combination of these teachings would have

been obvious to a person of ordinary skill and would have yielded predictable results.

2.   Claim 2, 6, 12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts

(US 2003/0152039), Ise et al. (US 6,336,129) as applied to claims 1 / 11, further in view of

Jogalekar (US 7,002,977)

     For claim 2, 6, 12, 16, Roberts and Ise discloses all the claimed invention as described

     above.

     Roberts and Ise are silent about:

     For claim 2 and similarly for claim 12, causing said generated charging information to be

     forwarded to a charging system of the communication network.

     For claim 6, upon enforcing said charging policy, data volume counters are initialized.

     For claim 12, the forwarding unit.

     For claim 16, an initialization unit configured to initialize data volume counters and/or

     time counters responsive to enforcing said charging policy.

     Jogalekar teaches a network element with the following features:

     As regarding claim 2 and 12, Jogalekar discloses causing (see column 8 lines 38-48

     "billing engine..transmit…to the network manager") said generated charging information

     to be forwarded (see column 8 lines 18-25 "billing engine may compile …billing and

     accounting information") to a charging system (see column 8 lines 38-48 "network

     manager" and column 4 lines 47-49 "network manager…receives…information…for

accounting and billing purposes")of the communication network (see column 4 lines 1-7

"network")

As regarding claim 6, Jogalekar discloses initializing (see column 12 lines 61-61 "creates

service-specific counters such as either incrementing…or decrementing…") data volume

counters (see column 11 lines 41-50 "service-specific counters…counters…counts the

packets") upon enforcing said charging policy (see column 1 lines 61-67 "charging a

premium rate" and column 11 lines 11-13 "policy engine…checks…policy table" and

Figure 6 608,614, 616).

For claim 12, Jogalekar discloses the forwarding unit (see column 8 lines 38-48 "billing

engine..transmit…to the network manager")

For claim 16, an initialization unit configured to initialize data volume counters (see

column 12 lines 61-61 "creates service-specific counters such as either incrementing…or

decrementing…") responsive to enforcing said charging policy (see column 1 lines 61-

67 "charging a premium rate" and column 11 lines 11-13 "policy

engine…checks…policy table" and Figure 6 608,614, 616).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Roberts and Ise by using the features, as taught by

Jogalekar in order to provide a method of a sophisticated accounting and billing method

where different traffic, such as high priority traffic, is charged at a premium rate (see

Jogalekar col 1).

3.   Claim 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts

(US 2003/0152039), Ise et al. (US 6,336,129) as applied to claim 1/11, further in view of Gai et

al. (US 7,185,073).

>   For claim 3 and 13, Roberts and Ise teaches the claimed invention as described in
>
>   paragraph 4.
>
>   Roberts and Ise are silent about:
>
>   As regarding claim 3, enforcing is performed upon start-up of the network element.
>
>   As regarding claim 13, Gai et al discloses said enforcing means are responsive to start-up
>
>   of the network element to perform the enforcing.
>
>   Gai et al. from the same or similar field of endeavor discloses enforcing a policy the
>
>   following features:
>
>   As regarding claim 3, Gai et al discloses enforcing is performed (see column 6 lines 21-
>
>   26 "rules that are utilized by the intermediated devices") upon start-up (see column 6
>
>   lines 21-26 "Upon initialization") of the network element (see column 6 lines 21-26
>
>   "intermediated devices")
>
>   As regarding claim 13, Gai et al discloses said enforcing means (see column 6 lines 21-26
>
>   "rules that are utilized by the intermediated devices") are responsive to start-up (see
>
>   column 6 lines 21-26 "Upon initialization") of the network element (see column 6 lines
>
>   21-26 "intermediated devices") to perform the enforcing (see column 6 lines 21-26 "rules
>
>   that are utilized by the intermediated devices").
>
>   It would have been obvious to one of the ordinary skill in the art at the time of the
>
>   invention to modify the system of Roberts and Ise by using the features, as taught by Gai

et al., in order to provide a system which can implement network wide management

policies (like queueing strategies), without the need to manually configure each device

which is time consuming and error prone (see Gai column 5 lines 35-64).

4.   Claim 4 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts

(US 2003/0152039) and Ise et al. (US 6,336,129) as applied to claim 1/ 11, further in view of

Hundscheidt (US 7,369,541).

For claim 4 and 14, Roberts and Ise discloses all the claimed invention as described

above.

 Roberts and Ise are silent about:

For claim 4, the enforcing is performed upon activation of the packet data protocol

context.

For claim 14, enforcing unit is further configured to be responsive to activation of the

data protocol context to perform the enforcing.

Hundscheidt from the same or similar field of endeavor discloses the following features:

For claim 4, Hundscheidt discloses the enforcing is performed upon activation of the

packet data protocol context (see col 11 line 15-35 "Activate PDP Context accept...starts

to charge the attached mobile station").

For claim 14, Hundscheidt discloses enforcing unit is further configured to be responsive

to activation of the data protocol context to perform the enforcing (see col 11 line 15-35

"Activate PDP Context accept...starts to charge the attached mobile station").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Roberts and Ise by using the features, as taught by

Hundscheidt, in order to provide an efficient introduction and performing of multicast in

a point —to-point oriented packet-switched telecommunication network (see

Hundscheidt col 5)

5.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US

2003/0152039), Ise et al. (US 6,336,129) and Hundscheidt (US 7,369,541) as applied to claim 4

above, further in view of Schweitzer et al. (US 2002/0013849 A1).

For claim 5, Roberts discloses the packet data protocol context (see section 0004 "billing

system to differentiate between different services on the same PDP context"; sections

0062-79 "PDP context"; section 0087 "context is set-up").

Roberts, Ise and Hundscheidt does not explicitly disclose the following:

As regarding claim 5, enforcing is performed dynamically during the lifetime of the data

session.

Schweitzer from the same or similar field of endeavor discloses the following:

As regarding claim 5, Schweitzer discloses enforcing (see section 0035 lines 4-15 "voice

over IP call…single session…checked…does not exceed..) is performed dynamically

(see section 0035 lines 4-15 "…single session…checked every minute…does not

exceed..) during the lifetime (see section 0033 lines 1-4 "session..definite time bound") of

the data session (see section 0035 lines 4-15 "voice over IP call…single session").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify/combine the system of Roberts, Ise and Hundscheidt by using the

features, as taught by Schweitzer, in order to provide a method of limiting/allowing

certain user certain amount of bandwidth, quality of service to certain users (for example

depending on the account type or fees payed) (see Schweitzer sections 0043-46)

6.   Claims 8-10, 15, 18- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Roberts (US 2003/0152039) and Ise et al. (US 6,336,129) as applied to claims 1/ 11, further in

view of Schweitzer et al. (US 2002/0013849 A1).

For claim 9 and similarly 19, Roberts discloses creating (see section 0036 "content-based

billing, content value…relevant URLs") a plurality of charging policies (see section

0012-14 "determining said rules and each packet address, a respective billing tariff and

account for that packet" section 0020-21 "charging information is achieved via the

analysis of packets, preferably at the GGSN...URL or IP address and port number of the

server...protocol"; flow of a server / application distinguished and section 0028, 0058

"charging is related to content or application, rules within the GGSN will be

triggered…charging rates being applied.." and section 0062-68 "GGSN filter…and is at

a MusicSite rate" and section 0095, section 0101 "GGSN matches site IP address/URL

etc and places costs in the relevant traffic CDS"; section 0104), each charging policy of

the charging policies (see section 0012-14 "determining said rules and each packet

address, a respective billing tariff and account for that packet" section 0020-21 "charging

information is achieved via the analysis of packets, preferably at the GGSN...URL or IP

address and port number of the server...protocol"; flow of a server / application

distinguished and section 0028, 0058 "charging is related to content or application, rules

within the GGSN will be triggered…charging rates being applied.." and section 0062-68

"GGSN filter...and is at a MusicSite rate" and section 0095, section 0101 "GGSN

matches site IP address/URL etc and places costs in the relevant traffic CDS"; section

0104) comprising at least one flow parameter (see section 0036 "IP address or

URL...relevant URLs"), selecting a charging policy based on offered services (see

section 0036 "operator enters a deal to provide premium rate access charges"), and

causing said selected charging policy to be distributed to at least one network element

(see section 0036 "pre-provisioned...provisioning the relevant URLs as required into the

GGSN") to be enforced at said at least one network element (see section 0020-21

"charging information is achieved via the analysis of packets, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0028, 0058 "charging is related to content or

application, rules within the GGSN will be triggered...charging rates being applied.."

and section 0062-68 "GGSN filter...and is at a MusicSite rate" and section 0095, section

0101 "GGSN matches site IP address/URL etc and places costs in the relevant traffic

CDS"; section 0104) for charging of data reaching said at least one network element (see

section 014 "packet analyzer for determining from said rules and each packet address, a

respective billing tariff" and section 0021 "analysis of packet, preferably at the

GGSN...URL or IP address and port number of the server...protocol"; flow of a server /

application distinguished and section 0028, section 0036) during a packet data protocol

context (see section 0004 "billing system to differentiate between different services on

the same PDP context"; sections 0062-79 "PDP context"; section 0087 "context is set-

up").

For claim 10 and 20, Roberts discloses wherein said charging policy is selected (see section 0036 "operator enters a deal to provide premium rate access charges") for a type of said network element (see section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN...URL or IP address and port number of the server...protocol"; flow of a server / application distinguished and section 0028, 0058 "charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.." and section 0062-68 "GGSN filter...and is at a MusicSite rate" and section 0095, section 0101 "GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS"; section 0104).

Roberts and Ise do not explicitly disclose the following:

For claim 8 and 18, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication;

For claim 9 and similarly 19, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication; selecting a charging policy based on subscriber information.

As regarding claim 15, Schweitzer discloses said enforcing means the enforcing during the life-time of the data session.

Schweitzer from the same or similar field of endeavor discloses the following features:

For claim 8 and 18, Schweitzer discloses where the charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-6 "policy..billed for usage" and section 0063 lines 1-5 "billing on a per session basis... IP telephony, that might be charge

per minute per leg. For HTTP that might be a charge per megabyte) and a tarriffing

indication (see section 0043-45 lines 5-6 "policy..billed for usage" and section 0063 lines

1-5 "billing on a per session basis… IP telephony, that might be charge per minute per

leg. For HTTP that might be a charge per megabyte)

For claim 9 and similarly 19, Schweitzer discloses Schweitzer discloses where the

charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-

6 "policy..billed for usage" and section 0063 lines 1-5 "billing on a per session basis… IP

telephony, that might be charge per minute per leg. For HTTP that might be a charge per

megabyte) and a tarriffing indication (see section 0043-45 lines 5-6 "policy..billed for

usage" and section 0063 lines 1-5 "billing on a per session basis… IP telephony, that

might be charge per minute per leg. For HTTP that might be a charge per megabyte)

,;selecting a charging policy based on subscriber information (see section 0035 lines 10-

15 "prepaid calling" and section 0043 lines 5-6 "policy might control how users..are

billed for usage", section 0045 "policy…user and group based restriction and

evaluations").

As regarding claim 15, Schweitzer discloses said enforcing means (see section 0102

"hardware…combination of hardware and software")are dynamically performing (see

section 0035 lines 4-15 "…single session…checked every minute…does not exceed..)

the enforcing (see section 0035 lines 4-15 "voice over IP call…single

session…checked…does not exceed..) during the life-time (see section 0033 lines 1-4

"session..definite time bound") of the data session (see section 0035 lines 4-15 "voice

over IP call…single session").

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify/combine the system of Roberts and Ise by using the features, as

taught by Schweitzer, in order to provide a method of limiting/allowing certain user

certain amount of bandwidth, quality of service to certain users (for example depending

on the account type or fees payed) (see Schweitzer sections 0043-46)

7.   Claim 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts

(US 2003/0152039) and Ise et al. (US 6,336,129) as applied to claims 1 /11, further in view of

Chaskar (US 2002/0122432)

For claim 7 and 17, Roberts and Ise discloses all the claimed invention as described

above.

For claim 7 and 17, Roberts further discloses wherein said data flows are Internet

Protocol (IP) based packet data flows (see section 0012 "packet address" section 0021

"based on the destination of the service as described by the URL or IP address and port

number of the server"; section 0036 "IP address or URL"; sections 0062-79 "URL";

section 0101),

Roberts and Ise do not explicitly disclose the following:

For claim 7 and similarly 17, said flow parameters comprise at least one of an IP header

field, a transport header field, and an application level information.

Chaskar from the same or similar field of endeavor discloses the following features:

For claim 7 and similarly 17, Chaskar discloses said flow parameters comprise at least

one of an IP header field, a transport header field, (see section 0019 "fields..packet header

such as source/destination IP addresses, TCP/UDP port address…" and section 0025)

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Roberts and Ise by using the features, as taught by

Chaskar, in order to provide a technique that supports various QoS classes across the

GPRS core network in a scalable and efficient way (see Chaskar sections 0004-10).

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120.

The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/

Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473